

WHAT IS CLAIMED IS:

1. A disk array apparatus comprising:

a plurality of disk boxes each nearly taking the shape of a rectangular solid, and each having an air intake plane through which air flows in and an exhaust plane provided at an end opposite to that of the air intake plane, a plurality of disk drives being capable of being aligned and installed in each of the disk boxes;

a rack nearly taking the shape of a rectangular solid, disk units being accommodated in said rack so as to form a plurality of stages in a vertical direction, each of the disk units being formed by putting two of the side boxes side by side via a gap in a horizontal direction with the exhaust planes respectively of the two disk boxes being opposed to each other, ventilation being possible through planes of said rack respectively opposed to the air intake planes of the disk boxes and through a top plane of said rack, a draft path having a width nearly equivalent to a lateral width of said rack and extending in the vertical direction being formed by the gaps of the disk units accommodated in said rack so as to form the stages; and

an exhaust device disposed at an upper part of said rack, air within said rack being sucked in from the air intake planes of the disk boxes by said exhaust device so as to pass through the exhaust planes of the

disk boxes and the draft path, and being exhausted to outside by said exhaust device,

wherein said exhaust device is disposed with a nearly entire surface of an air intake port of said exhaust device facing a section of the draft path.

2. The disk array apparatus according to claim 1, wherein,

the disk drives can be installed in each of the disk boxes in a multi-stage form,

a flow straightening plate being disposed behind the exhaust planes of the disk boxes, the flow straightening plate having a plurality of vent holes to adjust a flow rate of the air sucked in by said exhaust devices,

supposing that the flow straightening plate is virtually divided into a plurality of divisional portions so as to correspond to stages of disk drives, a total area of the vent holes in a divisional portion located near said exhaust device being smaller than a total area of the vent holes in a divisional portion located far from said exhaust device.

3. The disk array apparatus according to claim 2, wherein, in each of the divisional portions, a total area of the vent holes in a position located nearer said exhaust device is smaller than a total area of the vent holes in a position located farther from said exhaust device.

4. The disk array apparatus according to claim

2, wherein:

a circuit board having connectors to electrically connect the disk drives is disposed between the exhaust planes of the disk boxes and the flow straightening plate, and

the vent holes in the flow straightening plate are disposed so as to be separated from the projected contour of the connector.

5. The disk array apparatus according to claim 1, further comprising a DC power supply for supplying power to the disk drives, and a battery for supplying power when a trouble has occurred in the DC power supply, said DC power supply and said battery being accommodated in a lowest stage of the rack.

6. The disk array apparatus according to claim 1, further comprising an air duct in said draft path in order to separate exhausts for stages in the rack from each other, said air duct nearly taking a shape of a cylinder.

7. The disk array apparatus according to claim 2, wherein each of said vent holes nearly takes a shape of a circle.

8. The disk array apparatus according to claim 2, wherein each of said vent holes nearly takes a shape of a rectangle.

9. The disk array apparatus according to claim 2, wherein a contour defined by said vent holes nearly take a shape of a rectangle.

10.           The disk array apparatus according to claim 2, wherein each of said vent holes takes a shape of a trapezoid or a triangle.